REMOVAL OF A FERAL CAT FROM SERRURIER ISLAND

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Islands off the Western Australian coast provide important 'arks' for a diverse range of flora and fauna (Burbidge 1989, Dickman 1992, Abbott and Burbidge 1995), and programs are underway by the Department of Conservation and Land Management (CALM) to eradicate introduced pests and return these islands to their original state (Morris 1989). Feral cats, in particular, are well known for their detrimental impact on native fauna (Veitch 1983, Horsup and Evans 1993, Gibson *et al.* 1994, Christensen and Burrows 1995, Bamford 1995).

Serrurier Island (21°36'26"S, 114°40'46"E) is a nature reserve of 350 ha, and is situated 1400 km north of Perth and 20 km off the Pilbara coast. It is a sandy cay and an important breeding site for Wedge-tailed Shear-waters, Ospreys, White-bellied Sea-Eagles, Beach Stone-curlews and Caspian Terns. The island is also an important nesting ground for Green Turtles, and supports seven species of terrestrial reptiles (LeProvost Environmental Consultants 1993). There are no native terrestrial mammals.

Serrurier Island has recently been considered as a suitable site for the translocation of the Pilbara Short-tailed Mouse *Leggadina* affin. *lakedownensis*, currently known from a single population on nearby Thevenard Island and two site-locations on the mainland. The translocation is necessary to increase the security of this threatened species, particularly if baiting for House Mice *Mus domesticus* on Thevenard Island is to proceed. Translocation could only proceed, however, if the feral Cat was removed from Serrurier Island.

PAST SCENARIO

A feral Cat was first reported on the island in 1987 and evaded attempts at shooting or poisoning on several occasions (Oliver 1990). Serrurier Island is often used as a stop-over destination for both commercial and recreational fishing and diving parties, and it seems likely that the Cat was once a pet that either escaped from a boat or was allowed to roam onto the island and remained.

A single set of tracks often seen in the sand indicated that only one feral Cat existed on Serrurier Island. There is no free water on the

island, suggesting that all its water requirements are obtained through its food sources (Prentiss *et al.* 1959). During annual shearwater surveys the Cat was often sighted near the campsite, drinking water that was dripping from a container (Oliver 1990, P. Kendrick *pers. comm.*). Attempts to shoot it on four occasions and poison it on two occasions were unsuccessful (Oliver 1990). Birdlife killed by the Cat were noticeable and included nesting Silver Gulls, Osprey chicks and Wedge-tailed Shearwaters (Oliver 1990, *pers. obs.*).

PRESENT SCENARIO

Attempts to eradicate the Cat using 1080-impregnated meat baits over two nights during August 1995 were unsuccessful, particularly as alternative food (nesting shearwaters) was plentiful. A further attempt was required at a time when shearwaters were leaving the island. In March 1996 personnel from CALM (Karratha), West Australian Petroleum, and the University of Western Australia undertook another program to eradicate the Cat from Serrurier Island.

Baits impregnated with the toxin sodium monoflouroacetate (1080) were set around an area of high Cat activity with many Cat-tracks in the sand. Baits included beef-sausages smeared liberally with a 'chicken-digest' paste (Friend and Algar 1994), fresh mulies and tinned Cat-food (fish and chicken flavour). The head, tail and gut of the mulies were removed before they were injected. Each bait weighed approximately 70 gm (fresh-weight) and was injected on-the-spot with a lethal dose (0.3–0.5 mg/kg body weight) of 1080 concentrate (red) poison distributed throughout the bait. In addition, 5 cage-traps smeared with fish-oil were set in the area, and mulies or sausages were placed inside as lures. A rifle was carried at all times. Sand was swept smooth around each bait-station or cage-trap to identify whether the Cat approached at any time. One bait was set at each bait-station.

The island was searched for signs of the Cat using foot-prints in the sand as an indication of activity. Prints found along the foredunes of the north-eastern side of the island suggested that the Cat was using these dunes as a pathway. Twenty-one bait-stations were set along this area of Cat activity, and each bait-station was marked with a long piece of flagging tape that – when moved by the wind – has been known to appeal to the curiosity of cats (D. Algar *pers. comm.*). Baits and cage-traps were alternated between bait-stations. Baits were placed either along the path of the tracks or under nearby tussocks of grass or shrubs. No baits were taken the following morning, and no fresh Cat prints were seen. A further scan of the island revealed an area of higher and more recent use by the Cat, and fresh prints and scats were seen in the sand. It was decided to discontinue baiting in the first area and concentrate baiting here; 15 bait-stations were set as above.

One poisoned sausage was missing early the following morning, and

fresh Cat-tracks led to and away from the baited station. A grey tabby Cat was flushed from vegetation some 25 metres from this bait-station; attempts to track it down, however, were unsuccessful. It was predicted that the Cat had only recently eaten the bait and would soon die. Symptoms of 1080 poisoning occur within 3 hours, and death usually occurs within 24 hours (Agriculture Protection Board 1995).

The area was cleared of Cat-tracks and old baits that afternoon for post-baiting monitoring. No fresh tracks were seen on the following two mornings, and no further baits were removed. A search of the area revealed no Cat carcass although the large number of shearwater burrows and thick scrub made searching difficult. It was believed that the Cat had been killed, so all injected baits were collected and disposed of approximately 60 cm below the sand in the intertidal zone (1080 is highly soluble in water). Remaining equipment (gloves, plastic bags) was incinerated.

A survey of the area by personnel from CALM two weeks later revealed no sign of Cat activity. After nine years, the feral Cat on Serrurier Island is believed to have been successfully removed.

FUTURE SCENARIO

The programme in March 1996 to remove the feral Cat from Serrurier Island appears to have been successful, and no further sightings of the Cat have been reported. The translocation of the Pilbara Short-tailed Mice to Serrurier Island can now proceed as part of the recovery of the population that exists on Thevenard Island.

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